

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

We claim:

1-24. (cancelled)

25. (currently amended) A method for ~~inhibiting an altered growth state of~~ agonizing smoothened activity in a cell ~~having a *pte* loss of function phenotype, *hedgehog* gain of function phenotype, or a *smoothened* gain of function phenotype~~, comprising contacting the cell with a composition including at least one cAMP ~~agonist~~ antagonist.

26. (currently amended) The method of claim 25, wherein at least one cAMP ~~agonist~~ antagonist ~~activates~~ inhibits adenylate cyclase.

27. (currently amended) The method of claim 25, wherein at least one cAMP ~~agonist~~ antagonist is a cAMP analog inhibitor.

28. (currently amended) The method of claim 25, wherein at least one cAMP ~~agonist~~ antagonist is cAMP phosphodiesterase ~~inhibitor~~ agonist.

29. (currently amended) The method of claim 25, wherein the composition ~~inhibits *pte* loss of function, *hedgehog* gain of function, or~~ agonizes smoothened gain of function-mediated signal transduction activity with an ED₅₀ of 1 mM or less.

30. (currently amended) The method of claim 25, wherein the composition ~~inhibits *pte* loss of function, *hedgehog* gain of function, or~~ agonizes smoothened gain of function-mediated signal transduction activity with an ED₅₀ of 1 μ M or less.

31. (currently amended) The method of claim 25, wherein the composition ~~inhibits *ptc* loss-of function, *hedgehog* gain-of function, or agonizes *smoothed* gain-of function mediated signal transduction activity~~ with an ED₅₀ of 1 nM or less.
32. (original) The method of claim 25, wherein the cell is contacted with the composition *in vitro*.
33. (original) The method of claim 25, wherein the cell is contacted with the composition *in vivo*.
34. (original) The method of claim 25, wherein the composition is administered as part of a therapeutic or cosmetic application.
35. (currently amended) The method of claim 34, wherein the therapeutic or cosmetic application is selected from ~~the group consisting of~~ regulation of neural tissues, bone and cartilage formation and repair, regulation of spermatogenesis, regulation of smooth muscle, regulation of lung, liver and other organs arising from the ~~primitive~~ primitive gut, regulation of hematopoietic function, regulation of skin ~~and or~~ hair growth, etc.
- 36-38. (cancelled)
39. (previously presented) A method for promoting growth or differentiation of a neuronal cell, comprising treating the cell with a cAMP antagonist.
40. (previously presented) A method for treating or preventing stroke, comprising administering a composition including a cAMP antagonist to a patient.
41. (currently amended) A method for treating or preventing ~~peripheral neuropathy a neurodegenerative disease~~, comprising administering a composition including a cAMP antagonist to a patient.